MEDICAL AND SURGICAL REPORTER

No. 1776. PHILADELPHIA, MARCH 14, 1891. Vol. LXIV.—No. 11.

CLINICAL LECTURE.

JAUNDICE FOLLOWING THE PASSAGE OF BILIARY CALCULI.—JAUNDICE FROM ANGEIOCHOLITIS.[1]

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Gentlemen: In anticipation of the discussion of hepatic disorders, which I shall make in a systematic way within a short time, I shall, to-day, call attention to some clinical illustrations of common affections of the liver.

This man, 60 years of age, was admitted to the hospital, October 28, four days ago. He has always been strong and healthy and temperate in his habits. He had syphilis 20 years ago, but did not have severe constitutional symptoms. For some years, he has had occasional pain in the region of the liver, but not marked enough to greatly inconvenience him. These pains were never followed by jaundice. His present illness began October 14, with severe pain in the pit of the stomach, where it remained fixed and was controlled only by the hypodermic use of morphia. Three days later he was found to be deeply jaundiced. Whether or not the jaundice began before this time cannot be stated. The pain continued for about four days. The bowels were costive at first, but since taking elaterium, they have been loose. There is tenderness in the epigastrium. The urine contained no albumin or casts and on October 31, it was amber clear. It is now more than two weeks since the attack, but yet he is still distinctly jaundiced. As you observe the skin of the entire body is yellow, although not deeply jaundiced. Probably, the best places to determine the existence of jaundice, so far as the skin is concerned, are about the chest, the epigastrium and the palms of the hands.

Let us now determine the cause of the jaundice in this patient, where I hope it may be readily arrived at. It is difficult to say how much importance is to be attached to these vague pains that have been mentioned as occurring more or less for some years. People often complain of pains about this region. They may have been rheumatic, but the last spell of pain was almost certainly dependent upon the passage of gall-stones. It is true that the pain was fixed at the epigastrium and that it did not extend up towards the right shoulder or through to the back, as the pain often does during the passage of gall-stones. It is, however, by no means constant that the pain of gall-stones extends in this way. It may be in the epigastrium, more commonly over the gall-bladder, and it may remain fixed in one place, although it is more common for it to extend upward and through to the back. I have repeatedly seen the pain connected with gall-stones referred to the epigastric region and remain there, as in this case. There is usually tenderness over the gall-bladder and about the position of the gall-duct. This tenderness may last for some time, as in the present case. It is readily explained by the irritation of the gall-ducts due to the passage of a rough or sharp-edged stone through the canal. Here are some specimens of average-sized gall-stones. Even one as small as the smallest of these with sharp edges, would set up inflammation of the gall-duct and account for the tenderness which we find. I call particular attention to this point as it has a bearing upon the diagnosis between gall-stones and simple catarrhal inflammation of the gall-duct. Very often at the time of the passage of the gall-stones there is vomiting.

[1] Delivered at the University Hospital.

But in this case, the man vomited only once and that was on the day following the severe pain. Usually, the bowels are constipated at the time and afterwards, and this is partly the effect of the pain and partly the effect of the sedatives given to relieve the pain, for usually powerful opiates are required, and these, of course, tend to produce constipation. The severe pain may last for an hour, or for several hours, or until it is controlled by an opiate. In fact, the pain may last for several days, as in this case. Immediately after the relief of the pain, jaundice is observed, or where the pain has continued for some time, jaundice may come on while the pain is still present. The pain sometimes stops abruptly, the little stone having forced its way through the duct and slipping into the duodenum; but you must not expect in all cases to find this abrupt ending of the pain. It often gradually subsides, but oftener the way in which it ends is masked by the fact that the patient has had a hypodermic injection of morphia or a suppository of opium or large doses of opium by the mouth, so that the way in which the pain ends is not known.

The jaundice is general. The mucous membranes and the skin are deeply stained. It is associated with the presence of biliary coloring matter in the urine. The movements of the bowels which follow the passage of a gall-stone are very light in color. Sometimes the stoppage is so brief that the bile enters the bowel again and mixes with the feces and there are no clay-colored stools. If the stoppage is longer, the feces will be pale. Often it happens, as in this case, that the patient has no opportunity to observe the character of the stools.

We note, then, as the symptoms of the passage of gall-stones, severe pain in the region of the liver, often extending to the shoulder and accompanied or followed by tenderness on pressure and usually vomiting. The pain comes on abruptly and may end abruptly, but often ends more gradually, or its disappearance is masked by the opiate. Jaundice comes on immediately after the pain, and sometimes while the pain is still present, if this lasts for a day or two. The attack is not attended with fever, but fever may follow as a result of the inflammation of the duct caused by the irritation of the gall-stone. The attack is usually not preceded by evidences of gastro-intestinal catarrh. There has not been a spell of diarrhœa or signs of gastric irritation. Of course, these may exist; but in the majority of cases they will not be found. This point is of importance in the diagnosis between gall-stone and catarrhal hepatitis with spasm. The only way in which the diagnosis of gall-stone can be positively verified is by searching the feces after the attack. The next or the two next stools should be secured, tepid water should be poured upon the fecal mass, which should be stirred with the whisk of a broom and then passed through a sieve, so that if any of these little stones are present they will be found. The failure to find gall-stones is not positive proof that there are none. The stone may have been broken up or disintegrated, or it may have become lodged in some pocket of the colon and not be discharged until some time after the attack. In the majority of cases, however, you will find it in the first or the second stool following the spell. The jaundice will last for a varying length of time according to the duration of the obstruction in the duct. If the stone has been large and has taken a long time to go through, the jaundice may last for ten days. If the stone has been small, the jaundice may pass away in a day or two. It also depends upon the amount of damage to the duct. If the duct is much irritated and inflamed and is swollen, jaundice may continue for several weeks, dependent not upon the gall-stone but upon the destructive inflammation of the gall-duct. This man has jaundice lasting rather long. It is now seventeen days since the attack and he is still jaundiced and there is distinct tenderness over the gall-duct. I take it that this is due to swelling of the mucous membrane partially closing the duct.

The diagnosis of gall-stone is usually easy. I do not know what it could be confounded with. Not with renal colic, for there the pain is in the back, running into the genitals with retraction of the testicle and frequent desire to pass urine. The urine is affected, often bloody and no jaundice follows. Sometimes gall-stones pass and no jaundice follows. I have not rarely noticed that—a sharp spell of pain and gall-stone found in the feces and yet no jaundice, because the stoppage was too short to permit resorption of enough bile to stain the skin, or because the stone was so small that there was not complete occlusion of the duct. In these cases you may be thrown off the track as the spells of pain may resemble gastralgia. I would advise you, therefore, if you have

paroxysmal pains that seem obscure, to have the feces carefully searched. I have found gall-stones even where there was no trace of jaundice. Sometimes I have secured as many as six or eight calculi.

I shall not to-day dwell upon the treatment of gall-stones. The most important part is prevention. Where you know that a gall-stone has been passed, you are anxious to prevent the formation of others. I wish to emphasize particularly the importance of getting the mucous membrane of the gall-bladder and duct in as healthy a state as possible. A gall-stone passing through the duct will injure and inflame it; thus a gall-stone may lead to inflammation of the duct; but on the other hand, inflammation of the duct may lead to the formation of gall-stones. The mucous membrane, being in a state of catarrh and more or less swollen, interferes with the free flow of bile, which remains in the gall-bladder, causing its distention, and thus the flow of bile is slow. The branches of the biliary duct have their lining thickened and there is a tendency for the bile throughout the liver to be retarded in its flow. This slow flowing bile becomes thick and there is a tendency to the deposition of the biliary salts or biliary coloring matter. As a result of the inflammation of the mucous membrane, little flakes or shreds of mucus are formed, and may constitute a nucleus which at once becomes encrusted with biliary salts and coloring matter, and we have the beginning of a calculus. I have no question that in many cases the formation of gall-stones is invited and favored by the presence of catarrhal inflammation of the lining membrane of the gall-bladder and duct. Therefore, in order to prevent the formation of other calculi, it is important to have the condition of the mucous membrane as nearly healthy as possible. For this reason I like continued counter-irritation over this region. In this case I shall apply a series of small blisters, an inch and a half in diameter, repeating them at intervals of six or seven days. The man will be kept quiet, with light diet and a mild saline to keep the bile free and thin. At the moment of the attack you have to relieve the intense pain. The best agents for this purpose are morphia and atropia hypodermically. Chlorodyne by the mouth is useful; but as there is sometimes vomiting it is not so prompt as the subcutaneous injection. Suppositories are too slow. Frequently one hypodermic injection of a quarter of a grain of morphia with a one-hundredth of a grain of atropia will lull the pain, and before the effect is over the stone has passed. If necessary, the injection can be repeated. If the attack is over soon, there is no seriousness about it. The patient should be kept quiet until the jaundice has passed away. Then preventive treatment, to relieve the irritation of the mucous membrane and to get the bile to flow freely, should be instituted. In the present case I shall give the man, in addition to a small amount of Rochelle salts morning and evening, a pill three times a day containing:

℞ Argenti nitratis . . . . . gr. ¼
Ex. opii
Ex. belladonnæ . . . . . aa gr. $\frac{1}{10}$

Jaundice from Angeiocholitis.

I shall now call attention to a young woman who came to me some weeks ago, and whom I sent here to watch her case carefully. She was induced to come because of the great improvement which followed in the case of a friend of hers, who came here with terrible jaundice, emaciated to a skeleton, and with a history of repeated spells of pain with deeper and deeper jaundice. The spells were also attended with fever and great soreness in the region of the gall-bladder. That woman was kept here for a long time. The diagnosis made was: obstructive inflammation of the gall-duct. We never found any calculi, although we searched for them frequently. I cannot assert that the gall-bladder is not full and practically obliterated, the pain having stopped because the stones are fixed. It may have been that the stones were too large to pass through the gall-duct; but one might enter and produce spasm and severe pain with jaundice, and then slip out. After remaining here some time, the woman got well and the skin became perfectly clear. In that case recovery took place because we cured the condition of the gall-duct.

This patient gives us the following history. She was admitted to the hospital two months ago. She has been married four years, and has had four miscarriages, but no living child. She was always healthy and could do the hardest kind of work until after her marriage at the age of 21. Within eighteen months after marriage she had three miscarriages, which she attributes to hard work. There is no history of venereal trouble. She has never had any symptoms, and her husband is said to be a strong and healthy man.

Two years ago last March she had her last miscarriage, which she attributes to cold taken during "the blizzard." She has not been well since. She had rheumatism four years ago and measles in February of this year. There is no family history of importance. The present illness began in March, 1888, with her last miscarriage. It began with a sense of distress in the hypochondriac region and between the shoulders. In June she began to vomit. Menstruation was scanty. She had a spell of vomiting lasting three days, and after that, every month from June to December she had an attack of vomiting for three or four days regularly at the time of menstruation. The vomiting partly took the place of the menstrual discharge, but not entirely. After December the periodic vomiting occurred every two weeks, and now menstruation stopped until April, 1889. Then she menstruated. It again stopped in June, and did not return until November. While she had the menses regularly the vomiting was less and occurred only at the monthly period. When the vomiting spells came close together and were severe, the menses disappeared. In June, 1890, she again missed the monthly sickness, which has not returned. She has vomited nearly every day during the past summer, mostly in the morning. She does not raise much, but has straining and gagging. Sometimes the matters vomited are coated with a little blood. In March, 1889, she began to have pain in the region of the liver, which has continued. It occurred over the gall-bladder and extended through the abdomen to the right shoulder. The jaundice has never left her. The skin is deeply stained all over the body. The urine is loaded with biliary coloring matter. She has had more or less diarrhœa since June, 1889, amounting to four or five movements a day, thin and of a whitish color. Her usual weight is 172 pounds, which is now reduced to 105 pounds.

Here then we have a history of periodic vomiting with marked evidences of intestinal catarrh, lasting since June, 1889, with severe jaundice beginning in March, 1889, and continuing until the present time. You will find nothing more difficult than to make an exact diagnosis in such cases as this. The points which strike one most forcibly are, in the first place, the protracted catarrhal irritation of the gastro-intestinal mucous membrane. I do not see how we can shut our eyes to that as the most prominent feature, where you have such a history. It is extremely probable that the inflammation has extended from the intestine to the bile-ducts, and caused catarrhal thickening and obstruction of these ducts and consequent jaundice. This we term catarrhal jaundice. The jaundice is the result of angeiocholitis or inflammation of the biliary vessels of the liver. I have already stated that you cannot assert that there are no gall-stones. In angeiocholitis the obstruction to the flow of the bile permits the formation of gall-stones, which may be shut up in the gall-bladder or may have come out from time to time. In this case we have not had any spells of pain indicating the passage of gall-stones. The woman has had continuous, not paroxysmal pain. For twenty months, she has had continuous pain in the region of the gall-bladder. There have also been cutting and knife-like pains at irregular intervals. The pain has never been severe enough to require the hypodermic use of morphia. There has been no great amount of fluctuation in the jaundice. She has been jaundiced continually. All of this points to the existence of some fixed lesion about the liver, and whether there be gall-stones mixed with it or not, it cannot be gall-stones only, unless it is a large gall-stone impacted somewhere. A large gall-stone entering the cystic duct between the gall-bladder and the hepatic duct and being impacted there could give rise to such symptoms as we have here. Usually, however, a gall-stone lodged in that position sets up inflammation and causes ulceration with fever, rigors and sweat. The ulceration advances until the patient dies from exaustion or the gall-stone passes by ulceration into the duodenum and the patient gets well. I have watched many cases where the stone has thus slowly advanced by ulceration until the cystic duct is obliterated, and the stone enters the common duct and this is obliterated, and it passes into the duodenum, with the recovery of the patient and the finding of a large stone in the feces. A large stone in the cystic duct which has not set up inflammation might account for the symptoms. There has not been much fever in this case. Lately there has been a temperature of 101°; but the course of the case has not been marked by much fever.

Turning now to a physicial examination of the abdomen, I find that the edge of the liver extends three inches below the margin of the ribs, showing that the organ is greatly enlarged. The surface of the liver is quite

smooth, the edge is thin and sharp and at most the surface is slightly granular. There are no tumors. I tried to find the gall-bladder, but cannot discover it.

What I suppose has happened here is that this woman, broken down by hard work and repeated miscarriages, the nature of which we do not know, had a violent gastro-intestinal catarrh and the inflammation has extended into the bile-ducts and set up angeiocholitis with obstruction, preventing the escape of the bile. This obstruction has been almost complete. Then the inflammation has extended from the mucous lining of the gall-duct to the peri-vascular connective tissue, setting up that type of cirrhosis which is known as peri-vascular or hypertropic cirrhosis. Around these dilated and chronically inflamed ducts we have thickening of the tissue of the liver.

The liver is uniformly enlarged. There is no reason here to do a laparotomy. One of the points that we have to settle in reference to a case of this kind is whether or not there is an impacted stone which should be removed with the knife. We have decided against laparotomy because the evidences of stone are not great enough; while the evidence that it is a case of this type of cirrhosis with chronic inflammation of the gall-duct is very strong. If that is the case, I cannot help thinking that this woman should get well.

I need not say that the question of cancer comes up in every case of this kind. I think the fact that the disease has lasted so long, and the fact that there is no distinct mass and that there is more or less fever, with the youth of the patient, would serve to exclude malignant disease. In older people it often is a difficult question to set cancer aside.

CRYSTAL COATING FOR WOOD OR PAPER.—Mix a very concentrated cold solution of salt with dextrin and lay the thinnest coating of the fluid on the surface to be covered by means of a broad, soft brush. After drying, the surface has a beautiful mother-of-pearl coating, which, in consequence of the dextrin, adheres firmly to paper and wood. The coating may be made adhesive to glass by doing it over with an alcoholic shellac solution. The following salts are mentioned as adapted to produce the most beautiful crystalline coating—*viz.*, sulphate of magnesia, acetate of soda and sulphate of tin.

COMMUNICATIONS.

A VIEW OF KOCH'S REMEDY FOR TUBERCULOSIS.[1]

BY WILLIAM HUNT, M. D.,
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It is now time for me to speak briefly of the great medical event of the past year, which has attracted the attention and the hopes of the world at large, as well as of the profession of medicine and surgery.

Singularly enough, in January, 1883, it fell to my lot to give the annual oration before the Philadelphia Academy of Surgery. In that oration, the orator is expected also to notice what has occurred of interest to surgery during the preceding year. Koch announced his discovery of the bacillus tuberculosis in 1882, and that it was the cause of consumption and other tuberculous diseases. The announcement attracted as great professional interest as the one of 1890; but of course it did not create such a public *furore* as this one, because naturally the public are not interested to any extent in the *science* of medicine, but they are intensely interested in the cure of disease. It was a notable occasion in 1883, because we had, besides the oration, a microscopic exhibition of micro-organisms, among which were two or three slides (I think obtained by Dr. Formad) containing the bacillus tuberculosis. These were the first seen in this city and among the first in the country, and, of course, attracted much attention.

Now it becomes my duty to notice the startling announcement of the same indefatigable bacteriologist, that he has discovered a method of destroying tuberculosis tissue *in situ* and of thus preventing the ravages of the most potent enemy of human life known to mankind. Is it any wonder that such an announcement was received with profound astonishment, and on the part of all with the most respectful, and, I might say, with the most reverential regard? Berlin was the centre of attraction, Koch the object of honor. We all know how the representatives of science and the victims of sickness flocked to that city.

It is unnecessary for me to go over the

[1] Portion of an address delivered at the last annual meeting of the Association of Ex-Residents of the Pennsylvania Hospital.

history in detail, as it is familiar to all. The efforts at secrecy, the general and professional condemnation of this course, the revealing of the composition of the remedy, the spare granting of small quantities of it to certain favored ones and the distribution to different parts of the world of the precious liquid are equally well known.

And, with it all, no disrespect, no denunciation or no ridicule of the famed discoverer. His behavior throughout has been grand. He never wished for publicity, but was forced, as it were, by popular and professional clamor into exposure. Time, much more time, was required for laboratory and test work.

When, then, he announced, "The remedy, therefore, is a glycerine extract of pure cultivations of tubercle bacilli," he made no boastful claim, but told us how and when to use it, and of its dangers as well as of its benefits. Is its use to end in bitter disappointment or not? Koch, himself, must have been as interested as any one in that remarkable lecture—we might say clinical lecture—of Virchow's, held the 7th of January, 1891, when he discussed Fraenkel's paper at the Berlin Medical Society. I do not think Koch was present. The scene must have been very impressive. The veteran and profound pathologist stood at his table, and on it were what was worth showing, from *twenty-one post-mortem* examinations of patients who had died after the injection treatment. Think of this at one clinic! Of the twenty-one, 16 were cases of pulmonary phthisis. These were the cases to the end of December. The lecturer speaks of 6 or 7 cases in the present year up to January 7, and he says, "in addition to this my assistants have made necropsies in a large number of similar cases at other hospitals and in private, and I have seen the most important results of the examinations." The crowded audience gazed with intense and silent interest, as he took up piece after piece and showed the changes that he thought were due to the old disease and those that were brought on by the new treatment. No word of disapproval or ridicule escaped him. The specimens themselves proclaimed their own lessons. A mere superficial notice of what was shown and said at that lecture can only be made here. You may have read it, or if not, you can read it in the *British Medical Journal*, of January 17. He showed extra hyperemias in a case of tubercular arachnitis, and evidently thinks that the fatal result was precipitated by the remedy.

Again he says, "In particular it was repeatedly noted by us, that even the surfaces of pulmonary cavities showed unusually intense redness of the granulation layers; moreover *hemorrhagic* infiltrations of the walls were not seldom present, and even recent hemorrhages were observed in the cavities."

After describing certain swellings, rapid proliferations, etc., he says: "These swellings occasionally assume a very dangerous character. I will only refer to the phenomena which are seen in the larynx, where even in cases where the ulcerated surfaces become clean, the adjoining parts swell to an enormous extent and cause constrictions of a very critical nature. Together with these changes there occasionally occur other more violent forms which take on a phlegmonous character and remind one of œdema glottidis erysipelatodes, and retro-pharyngeal abcess"—and here he showed specimens.

Again: It was noticed that among the fatal cases of ulcerative phthisis that the large majority exhibited recent changes of great extent, more particularly in the lungs, but also pleurisy and for the most part very severe pleurisy, simple and tuberculous, frequently hemorrhagic, and not infrequently bi-lateral. He then, with the fairness of a fair-minded man, discusses whether the lesions exhibited were due to the treatment, or would have occurred in the natural progress of the disease. Showing a specimen he says, "From the most characteristic of one of these comes this piece of lung, which shows such extensive caseous hepatization that I do not remember to have seen anything like it for years." And then, most important of all, he discusses the development of *fresh* tubercules in these cases, and gives by observations strong proofs of their happening, and says: "I am strongly convinced that these fresh eruptions first appeared *ex-post*." He speaks of the mobilizing of bacilli and setting them free to attack other parts, and gives a characteristic example. The breaths of the audience must have almost stopped at the end of this lecture.

After reading it at the library of the College of Physicians, I was involuntarily reminded of the drawings we have in the Mütter Museum, taken from Dr. Weir Mitchell's cases, and showing the effects of rattlesnake bites on pigeons. Man often is a stupid

animal. He knew the anatomy and action of the rattlesnake hypodermic, years before he invented a little machine for his own professional use. This dreadful Virchow lecture shows that now he can compete with the snake for results.

Hear the other side! Is there one to hear? Has a favorable report been given anywhere in the world to offset this one of Virchow's? I can find reports of none, and I have looked over many reports. Every clinician is in waiting. The editorial in the same journal that publishes the report of this clinic is very fair. It says: "That these observations are of enormous value; that any one who thinks that all that is necessary to practice Koch's method is to have a bottle of the lymph and a hypodermic syringe, is mistaken; that he who thinks of carrying it out should make himself thorough master of Koch's original statements, which are calm to a degree and are as unbiassed as any man could expect those of the author of such a method to be. The method is still on trial and those who wish to keep an open mind can do so only by a careful study of scientifically observed facts as they are placed before us."

And so say we all of us—Wait! That the present dangers are recognized through the influence of Virchow's clinic, is shown by this telegram in our papers dated Feb. 13—only four days ago—"An important discovery. Dr. Weyl, an associate of Professor Koch, has discovered a method of detecting in the Koch lymph the poisonous elements described by Professor Virchow, and of eliminating them so as to produce a lymph free from bad properties."

There is nothing new. That charming and learned writer, Benjamin Ward Richardson, has a short article in the last number of the *Asclepiad*, on Pulmonary Consumption, which opens thus: "In many parts of provincial England it was once a practice, hardly yet abolished everywhere by the common people, to treat persons affected with consumption of the lungs by making them swallow live snails. The vulgar idea of the *modus operandi* of the medicine was that the snails found their way to the lungs of the patient and ate the black worms which lived on the lungs and caused, by their depredations, the disease. The snail treatment got a great reputation, for which probably it depended on two collateral causes. The persons who were benefited by it were led to seek the remedy in purer air than they had been accustomed to live in; and in addition to the snail, which did neither good nor ill, they partook freely of new milk and cream, rich foods likely to be important adjuncts in the cure. Of late the idea that pulmonary consumption is a parasitic disease is revived. The lungs infested with hosts of a specific bacillus is supposed to be destroyed by them or by the secretion which they eliminate; and the mode of cure is expected to be found in a lymph or poison which shall kill the bacillus without injury to the patient." Further on the writer shows that he keeps his opinions in reserve for he says: "But scientific medicine is conservative and careful before she speaks a word; and the more so because, in her too ready acceptance of speculative practice in former days, she has reason to become wary and chary of belief. Some of her children run after new remedies and false gods fast enough; and many, no doubt, will run after this new promise long before there is sufficient evidence either for its establishment or its delegation to the shades of departed fallacies."

Again we say, Wait!

VERATRUM VIRIDE.[1]

BY AARON C. WARD, M. D.,
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A careful study of the pathology of pneumonia not only leads to the conclusion that bleeding does harm, but that the use of all those agents which have been employed for the arrest of simple pulmonary inflammation are contra-indicated strongly. Hence veratrum viride, aconite, antimony, calomel, and all so-called "cardiac sedatives" have been discarded, for it is evident that they add a new load to an already over-burdened heart. They may for a time lower temperature and pulse rate, but this will be accomplished at the expense of heart power. "Cardiac insufficiency will therefore appear earlier and be more profound;" so says Prof. Loomis, and the principle expressed in this statement underlies the practice and teaching of a large class of intelligent physicians, whom we are wont to look upon as authorities.

That what seems to us an error should have such a strong foothold is the excuse for this brief essay. I believe the above position

[1] Read before the Practitioners' Club.

is untenable, and the arguments used in its support unsound physiologically and physically. For, first, the circulatory activity which occurs in pneumonia is not compensatory; that is, it is in no way dependent upon or proportionate to the obstruction existing in the lung or the consequent diminution of respiratory area. This is demonstrated by the fact that in all cases the cardiac activity is in excess of the amount necessary to compensate for the defective respiration; by the fact that we find just as high arterial tension and just as rapid heart-action when one lobe is involved as when two are; and, again, by the fact that the same condition of the circulation exists in other inflammatory affections where the respiratory surface is neither diminished nor its functional activity impaired.

In the second place, the amount of compensation which is rendered necessary is largely accomplished by the increased rapidity of the respiratory acts; while it would not be difficult for the respiratory apparatus, under favorable circumstances, to compensate entirely for its own defect without making any extra demand upon the heart. Moreover, such a result is eminently desirable, for the muscular apparatus of respiration can better bear over-taxation than can the heart.

In the third place, suppose that heart failure in pneumonia is principally the result of the effort of the heart to overcome the increased resistance in the lung, even so the auxiliary proposition is untenable—namely, that cardiac depressants increase, while stimulants decrease, the burden thrown upon the heart and the venous stasis which results. The converse proposition is much more rational and more in accordance with the facts. For though it is likely that arterial tension alone is not sufficient to produce exudation in an otherwise normal circulatory apparatus, yet it is certain that from the instant exudation is rendered possible by pathological changes in the walls of the vessels, the higher the arterial tension, the more rapidly the exudation takes place, and therefore the greater will be the severity and extent of the local inflammatory process. Again, if we consider the circulation as a whole we will see that the blood must complete the circuit of the pulmonary capillaries in the same space of time that it traverses that of the systemic capillaries. It follows that, whatever the pressure, if we could introduce an obstruction to the flow of the blood through a part of either system, the circulation in the remaining normal part of that system would of necessity be more active; in other words, there would occur in the rest of that system a compensatory or active hyperemia. Under such circumstances, any pathological condition which would increase the rapidity of the general circulation would proportionately intensify the embarrassment of the defective system, and *vice versâ*.

Again, the amount of energy necessary to be expended in injecting a given amount of fluid into an elastic reservoir is proportionate to the tension already existing in such reservoir.

Now the tension of the systemic circulation is normally at least five times greater than that of the pulmonary circulation. Therefore, to overcome any given increase in the systemic arterial tension requires the expenditure of five times as much of the heart's energy as a corresponding increase of tension in the pulmonary circulation; or, in other words, it would not be difficult to prove that the labor thrown upon the heart by the increased arterial tension of the systemic vessels which exists in pneumonia, is greater than that which would be caused by the total obliteration of the circulation through a whole lobe of the lung. Under such conditions it follows that we can do as much to save the heart from exhaustion by lowering the arterial tension of the system at large as we could were it possible for us to remove entirely pathological resistance existing in the diseased lung.

Again, the rise of temperature which occurs is proportionate to the circulatory activity, and is produced by the excessive oxidization and tissue waste which such abnormal circulatory activity makes possible. "No argument is necessary to convince you that the vital powers are rapidly exhausted when the heart is driving the blood through the system at the rate of 120 or 140 beats in a minute." Could anything be more irrational than to allow the heart to waste its own energy in destroying the energy of the system at large, and content ourselves with alleviating one of the injurious results of this process when it is within our power to remove the cause?

Again, we find the same physicians who so strenuously oppose the use of veratrum in pneumonia, in the next breath recommending other agents, whose value, where any such exist, rests upon the same basis as that

of the veratrum they discard. Or we find them using this same veratrum in other affections, in which practically the same conditions exist, and the same therapeutic indications are to be met as in pneumonia. For example, Niemeyer says in favor of the "bath" in pneumonia: "the temperature declines, and pulse falls and becomes soft and compressible, the skin grows moist and the patient feels refreshed," and this same authority, to use his own words, "feels it necessary to emphasize the evil effect of cardiac sedatives" administered in this disease. Or, again, how do those who contend that veratrum is inadvisable in pneumonia because it augments venous stasis and increases the labor of the heart, explain their endorsement of its use in the hypertrophy of the heart of chronic Bright's, where, practically, the same circulatory conditions exist?

Finally, we meet in practice several classes of cases such as chronic interstitial pneumonia, etc., where, as far as the lung is concerned, the circulatory conditions are identical with those in pneumonia, and yet in these cases there is no embarrassment of the heart, no compensatory hypertrophy, and no venous stasis, even though the disease has existed for years. Could any evidence be more conclusive?

If the foregoing reasoning is sound, I think I have proved that the rational treatment of the first stage of pneumonia is to reduce arterial tension, as far as that is possible consistently with the performance of those functions for which the circulation exists, namely, the distribution of nourishment and oxygen and the elimination of waste products. The degree of circulatory activity which may be necessary to attain these ends may be greatly reduced, on the one hand by supplying the nourishment and oxygen in such a form and degree of concentration as shall render assimilation more easy and rapid, and on the other hand by assisting in the many ways at our disposal the activity of the other emunctories, that their increased functional activity may compensate for the impaired elimination through the lungs.

In the foregoing argument we have spoken of pneumonia, because it is more easy to treat anything in the concrete than in the abstract, and also because pneumonia furnishes one of the most important applications of the principles involved. The conclusions at which we have arrived in the case of pneumonia are equally applicable to almost any other acute inflammatory process accompanied by high arterial tension; for example, pharyngitis, tonsillitis, laryngitis, bronchitis, bronchial pneumonia, pleuritis, peritonitis, nephritis, etc. To accomplish the desired sedative effect upon the circulation, our professional ancestors had resource to venesection, and though this occasionally proved of great service, yet, unfortunately, it involved an absolute loss of vital power, which experience has gradually taught us overbalanced the advantages to be gained. The practice has therefore fallen into disuse.

I shall not, however, consume your time in attempting by comparisons to demonstrate a proposition which, it seems to me, is beyond question, namely, that veratrum viride is the most rapid and most efficient cardiac sedative we possess; but I will turn immediately to the consideration of the other objection raised by its opponents, namely, that its sedative effects are obtained at the expense of heart power.

Any discussion of the physiological action of the several alkaloids present in this drug is foreign to our subject. Suffice it to say, that its physiological action as a whole is due to the combined effects of at least three distinct alkaloids, individual actions of which differ mainly in degree.

The important and characteristic actions of veratrum viride can all be considered under the two main heads; its effect on muscular activity and its effect upon the nervous system. Veratrum diminishes muscular excitability. This is an important fact, for while the sympathy of the motor nerves in this action is not completely disproved, yet it is demonstrated beyond a doubt that the action of veratrum viride mainly affects the muscles, and that its influence on the motor nerves is comparatively subordinate. A muscle so poisoned reacts for a long time to direct or indirect irritation, but this action is different from that which occurs in its natural condition. For while the contraction is performed in the ordinary time, the relaxation is very much protracted.

Veratrum exerts little or no influence on the motor and sensory nerves and upon the cerebral centres. To this statement there are several exceptions: the vasomotor centre is powerfully depressed; the activity of the pneumogastric is stimulated; the reflex of the spinal cord is at first markedly diminished and finally abolished; while the effect on the respiratory centre is in doubt. Whether or not this centre is affected, it fol-

lows from what has already been said in regard to muscular activity, that respiration must be slowed and finally cease. In the case of the heart, the same reason holds good, but here another factor enters the problem. The pneumogastric being more rapidly affected than muscular activity, the heart's action is at first slow, without the force of the individual beats being much altered. Later, when the muscular tissue of the heart feels its influence, the force also is lessened. Larger amounts of the poison finally produce paralysis of the terminals of the pneumogastric and of the cardiac muscle. The ultimate effect, therefore, on the heart is complete paralysis.

In consequence of the powerful depressing influence upon the vasomotor centres and the diminished force and frequency of the heart's action, arterial pressure is progressively and rapidly diminished. The free perspiration which occurs is another result of the vasomotor depression. The pulse, under the combined influences on the circulation, is at first slow and full, though always soft and compressible; later its strength is diminished, the rapidity being at the same time even further reduced.

The symptoms of a poisonous or excessive dose are simply an exaggeration of the physiological effects, and are almost precisely like those produced by tobacco in persons unaccustomed to its use. Intense nausea; incessant and violent vomiting and retching; complete muscular prostration with attacks of dizziness or fainting; slow and superficial respiration; a small, feeble and sometimes almost imperceptible pulse; an expression of great anxiety; a cold, clammy skin—these and associate symptoms present a condition which is at once distressing and alarming.

The rapidity with which the effects of veratrum viride disappear when its administration is suspended, and the almost entire absence of any persistent derangement of the functions affected, have been matters of general observation. They follow naturally as the result of the *modus operandi* of the drug and the rapidity of its excretion. The importance of their practical bearing is apparent. For if the physiological action of veratrum, as given above, is correct, it refutes the second objection raised by our opponents, and, on the contrary, warrants the assertion that veratrum is a heart tonic in the broadest sense of that word. This error probably arose because, while observing phenomena, the fact was lost sight of that there is a real and positive distinction between a weak pulse of repressed energy and that which results from absolute loss of power.

Just here it is proper to state, and to emphasize the statement, that while veratrum will absolutely and invariably control the quick, hard pulse of inflammation, it just as certainly will *not* reduce a feeble, rapid pulse of exhaustion, and this for the very simple reason that you cannot conserve energy which does not exist. Failure to recognize this distinction probably accounts for many of its reported failures.

The next question naturally presents itself: Is not the administration of such a drug so hazardous as to render its general use undesirable? This I answer in the negative, without any hesitation or qualification. While there are on record numerous cases where the alarming condition of the patient gave reason to expect a fatal result, yet in almost every instance we find that complete recovery has ensued. The number of fatal cases is small. On the other hand, the testimony of those who have given veratrum the most thorough trial and whose ability to judge is beyond question, is unanimous to the effect that there is practically no danger attending its use—absolutely none when intelligently administered.

Referring to the unpleasant symptoms resulting from an overdose, Barker says: "After an experience of more than thirty years in the use of veratrum, I feel warranted in saying that these phenomena are really not dangerous. I have never known any serious result to follow from its use. This condition is purely temporary, and patients pass out of it in a short time, even if no restoratives be given."

Wood affirms that, "although veratrum viride is a remedy of great power, capable of producing the most alarming symptoms, yet I believe it to be the safest of all cardiac depressants; certainly it is far less dangerous than aconite. It is somewhat doubtful whether a robust adult could be killed by a single dose of any of its preparations, especially if prompt and judicious treatment were afforded."

The evidence adduced is surely sufficient to establish the assertion that its intelligent administration is devoid of danger. It is no argument against a drug that it is capable of doing mischief, if, when intelligently and judiciously administered, its therapeutic value

is available without incurring the risk of such mischief. To advance such an argument is to plead ignorance or indolence.

The therapeutist has at hand numerous drugs which, if not more powerful than veratrum viride, are yet more singly spinal depressants. The field of its usefulness in this direction is therefore limited. I hope to show, however, that there is one condition in which its composite therapeutic effect renders veratrum the most valuable spinal depressant at our disposal.

However widely authorities may differ in their theories as to the exact pathology of puerperal convulsions, or in the remedies that they may advocate for the treatment of the same, there is practical unanimity as to the therapeutic indications to be met. Briefly these are, to lower arterial tension, to diminish to the fullest extent practicable the irritation of the vaso-motor and convulsive centres, and to restore to the kidneys their normal function. Venesection meets the first indication perfectly, by rapid reduction of the volume of the blood. It meets the second indication, though partially only, by removing a part of the toxic ingredients from the circulation, and by both these means it relieves somewhat the renal embarrassment. The testimony as to the prompt relief afforded is overwhelming, and this not only by those who wrote at the time when venesection was the orthodox treatment, but to-day, when in the face of public sentiment we find such men as Barker, Lusk and others pleading for the restoration of the lancet, and insisting upon the unmistakable clinical evidence in its favor. All admit, however, that because the arterial tension is rapidly re-established and the remedy cannot be repeated, the relief afforded is only transient, while the deterioration of the blood which ensues cannot but increase the danger of the disease. Its employment, therefore, is justifiable only in a most pressing emergency, on account of the rapidity of the relief afforded, and as an expedient to gain time for the action of other more satisfactory measures.

I have considered venesection to such length, principally because its success confirms a point which I desire to make, namely, that the reduction of arterial tension alone is sufficient to afford relief in this most distressing malady. The other agents most generally employed to-day are chloroform, chloral, potassium bromide and morphia. These are dependent for their usefulness on their antispasmodic power, since in the quantity which can be administered with safety they either do not at all influence arterial pressure, or they exert an unfavorable influence by raising it. They are not without merit, but as in each case this is qualified or offset by some danger or unfortunate concomitant action, their employment should, we think, be secondary and supplementary to the use of that remedy which theoretically and practically fulfils all the indications more perfectly than any single agent in the pharmacopœia. This remedy is veratrum. For veratrum is both the most powerful of arterial and of spinal depressants, and, at the same time, exerts a specific depressing effect upon muscular tissue in general. In other words, veratrum is not only a central antispasmodic, but a peripheral antispasmodic as well; if I may be allowed to use such an expression. Its action, moreover, is rapid and can be maintained almost indefinitely without danger. As regards the dosage in this condition, all that can be said is that enough must be given to bring the pulse down to about 60, and its administration must be continued for some time afterwards, and in such smaller doses as shall be sufficient to keep the pulse at about this rate. In order to save time, the initial dose at least is best given hypodermically.

In conclusion, I will cite briefly three cases to illustrate in practice the principles for which we are contending.

Case 1. Mrs. H., 45 years old, strong, well-nourished, previously well, was seized with a severe chill, followed by rapid rise of fever and pain in the side. I was called six hours later. The patient's face was flushed; pulse, 116, full and strong; temperature, 104°; stitch-pain in right side; frequent, restrained painful cough; pain intensified by full inspiration; respiration, 28. There were physical signs of pneumonia in the first stage, affecting the lower lobe of the right lung. I gave calomel (gr. x), sod. bicarb. (gr. xx), and tincture of veratrum viride (♏ iii), followed in half an hour by ♏ ii, and afterwards ♏ ii each hour. Counter-irritation was employed, etc. After the third dose of veratrum the pulse was 56; temperature, 102°; slight nausea; pulse maintained below 60 or 65 for two or three days. The physical signs persisted, increasing very slowly. The patient recovered, without having had consolidation of the lungs, in about the usual time. The inflammation seems in this case to have been held in check, the

lung never getting beyond the stage of intense congestion.

Case 2. A strong, healthy boy, 10 years old, had a severe chill with fever, cough, dyspnœa, etc. Six hours later his temperature was 103°, pulse about 140, respiration about 70. There was great dyspnœa; the skin was somewhat cyanotic; the cough was frequent and distressing, without expectoration. Prostration was great. There were physical signs of intense congestion of the lungs; the patient was apparently dying. Veratrum was given in frequently repeated small doses until the boy was nauseated. After three hours I saw the patient again; he was quiet, dyspnœa was relieved, the skin was more natural in color, the pulse below 90, and the respiration about 40, the temperature being 102°. The pulse was kept between 80 and 90, and recovery was rapid.

It does not follow that veratrum viride is to be discontinued after the first stage of pneumonia. While I am opposed to the custom of giving stimulants, saline or alcoholic, as a routine practice, yet I am perfectly willing to admit that, from this point on, their use in greater or less quantity is called for in a large proportion of cases. If at the same time we stimulate, however, we can so regulate the energy evoked that it shall be utilized with the least possible waste, we are doubly at an advantage. This we can accomplish by giving small doses of veratrum viride, along with a proper amount of alcoholic stimulant. For you will remember that the primary effect of veratrum is to decrease the rapidity of the pulse without affecting materially its quality. This primary effect can be maintained if the dosage is properly regulated. The administration of veratrum is not at all incompatible with the use of alcoholics, as is apparent in the following case, cited by Dr. Barker: "Veratrum viride alone did not seem to produce any effect on this case, the pulse remaining constantly above 130. It was decided to give brandy. After the first ounce had been given the pulse fell to 108; after the second to 86. Continuing the brandy, the veratrum viride was suspended for a few hours. The pulse again arose to 130. After this, it was curious to note the fact that if either agent was suspended, the pulse would rapidly increase in frequency, while under the combined influence of the two it was kept below 80 per minute."

PUERPERAL PNEUMONIA.

BY JAMES E. FREE, M. D.,
BILLINGS, MONTANA.

Mrs. S., primipara, was delivered of a female child weighing six pounds, May 23, 1890. She was a large, lank woman at the time of her lying-in, had been married about two years, and was thirty years old. Two months previous to this time she contracted the grippe, which did not develop any very serious symptoms, although it proved to be a tedious complaint. A slightly annoying cough was still present when labor set in. At 1 A. M., the sharp pains having lasted two hours, delivery was accomplished. It was an ordinary case, causing less suffering than is usual where the mother has reached such a mature age.

Some hemorrhage followed the shedding of the placenta, and ergot was administered to make the uterus behave physiologically. It is rarely necessary in a primipara, and in this case it might not have been so. However, it is a bold physician who will face a lot of old women and tell them to wait on Nature, when they know that a friend is bleeding. Two hours after delivery, the patient having brightened up considerably, a binder was applied, and the soiled clothing was removed. The woman's temperature at this time was 99°, her pulse 100. She expressed herself as comfortable while she remained perfectly still, and thought she could sleep. Between four and five o'clock in the morning I was summoned in great haste to her bedside. I found her suffering acutely with pain in the back. The pain was constant and located on both sides of the spinal column in the lumbar and dorsal regions, and it radiated downward to her feet. Not having had any similar experience, it was difficult for me to tell the origin of the trouble. Opium eaters are liable to have attacks of acute pains when they are in want of the drug, but here it did not seem as if the appetite was present. Ergot produces tonic spasm of uterine muscular tissue which is sometimes painful. Taking into consideration the amount of exercise the organ had undergone, it was not likely that fatigue would be the cause of the pain. When a set of muscles have been sharply used, or the use has been long continued, they show signs of exhaustion when moved. Perfect rest will generally partially relieve even

rheumatic pains. Here the uterus, after a normal labor, was contracted and at rest. The neuralgic symptoms were considered to be indicative of anemia of the cord. The woman's temperature was 98°, her pulse 96. A Dover's powder was ordered, which induced sleep and free diaphoresis. Several hours later she was put on Fowler's solution. The dull, colorless expression of countenance was similar to that of most victims of the morphine habit, and I thought more or less of the drug was necessary to a safe getting up.

Nothing of note occurred for several days. On the fourth day a decided rise of temperature was detected, morning 101°, evening 102°. The uterus was washed out three times in the next thirty-six hours, and antifebrin was prescribed. The patient was apparently comfortable until the physiological effect of the antifebrin became marked, when remarkable sweating, producing collapse, made it advisable to withdraw the remedy. Its anodyne effect was similar to that of the Dover's powder; but the latter seemed to fill the long-felt want for opium. Almost everything else nauseated the stomach when she had learned the effect of the ipecac and opium.

Two weeks after her confinement the patient was out of bed in a rocking-chair. She complained of so many troubles and seemed notwithstanding to be so strong, that she was allowed to get up. In the afternoon of this day she had an attack of acute pain in both legs. Her description of the pain, following the course of the large blood-vessels, made it probable that phlegmasic alba dolens was about to complicate matters. Fowler's solution and Dover's powder did not check the pain this time. Quinine could not be retained; neither could aconite. The temperature again went up to 102°. Lochial discharge was still present. The uterus was again washed out with warm water, but without any effect on the fever. Next morning a violent rigor, accompanied by intense internal congestion, came on, and lasted for two hours. Pain in the right side at the base of lung made breathing difficult and shallow. Auscultation and percussion revealed nothing abnormal. Blood-letting was indicated at this time as much as ever in my observation. However, as the lancet was wanting, also the cups, I concluded to fight it out with alcohol, mustard and hot water to the feet.

The next morning there were was almost complete percussion dulness on the right side, and an involvement of the lower border of the left lung. Pneumonia is said to be a treacherous disease, and if it was all this time manifesting itself in this case, it surely is entitled to that reputation.

The patient all along denied that she knew anything about morphia or opium, but the word of an habitué of these drugs is worthless. The temperature was 104½°, the pulse 150, the respirations 43. The aspect of affairs was very serious, and a consultant was asked for.

After an examination the consultant rejected the theory of opium eating, and suggested the administration of veratrum viride and a carbonate of ammonia mixture, with nothing hypnotic unless the cough was troublesome. The new treatment did not do well. Regular doses of brandy and cream and hypodermics of morphia at bedtime, to secure rest, was thought to be better, and consequently the consultant washed his hands of the case, and prophesied a speedy fatal issue.

It required eight weeks to establish convalescence. The temperature remained near 104° for seven weeks and then gradually subsided, and, as the fever left, a desire for food returned. Most troublesome of all the symptoms during the period was the dyspnœa, which showed itself every day, and threatened to terminate life, at first. Euphorbia pilulifera had recently come under my observation as a respiratory tonic, and its use in this case was beneficial. A half teaspoonful of the fluid extract given at the commencement of the dyspnœa, generally relieved it, but did not appear to have influence over its return. It was administered regularly latterly, and seemed to prevent the occurrence of the symptom. When expectoration commenced, the euphorbia was still a valuable remedy, seeming to promote resolution, and to act as a general tonic. While the difficulty of breathing lasted, its effect on the heart was analogous to that of digitalis, with more of a tendency to brighten the nervous force, and without any special action on the urinary function.

By October 1, the patient was in a lumber camp, away from drug stores, and with no opportunity to get opium. She had not yet entirely recovered health and strength; constipation was troublesome, headache was common and any kind of exertion was irksome and produced palpitation of the heart.

NEURALGIA FROM TOOTH-PRESSURE.

BY C. H. M. NEALL, M. D., D. D. S.,

PHILADELPHIA.

A gentleman called at my office on January 24, suffering with violent pain over the region of the left temple. The pain extended down to the angle of the inferior maxillary bone on the same side. I found, on examining the mouth, that he had erupted all of his teeth except the "wisdom tooth" on the right side, and upon making pressure over the gum in this region, that he experienced a great deal of pain. I found the gum and parts much inflamed. After satisfying myself that the tooth was the cause, I proceeded as follows. I made a free incision and found that the masticating surface of the tooth was deeply imbedded in the calcellated structure and pressing directly against the inferior maxillary division of the fifth pair of nerves. I extracted the tooth with some difficulty, and found that its root was exostosed. After removing the tooth, I syringed out the cavity with a 1-1000 solution of corrosive sublimate, and brought the parts together by means of a stitch. On January 27, the man returned to my office, informing me that the neuralgic pain he had suffered had entirely disappeared.

I have seen a number of cases like this in my own practice, and believe that we may many times trace neuralgic affections to cutting of the teeth.

PERISCOPE.

Dangers of Syringing the Ear.

In the *Atlanta Medical and Surgical Journal*, February, 1891, Dr. S. L. Philips, of Savannah, publishes an article in which he reports the case of a man, 54 years old, in fairly good health, save when suffering from bleeding piles, who for some weeks had experienced dulness of hearing on left side, and wished, if possible, to be relieved. On inspection, the canal of that side was found to be of average size, and containing a considerable amount of hardened wax. With a small rubber ball syringe, holding about an ounce and a half of water, filled with lukewarm water, Dr. Philips began to syringe the auditory canal. Several syringefuls forced gently into the ear not bringing away the wax, he used a little more pressure. Suddenly something seemed to give way. Water poured from the patient's left nostril, and he complained of a peculiar sensation in that ear, though he had no pain worth speaking of. The wax was loosened and easily removed from the canal. Dr. Philips thought, of course, he would find a perforation of considerable size in the membrane, the sequel of an old purulent inflammation of the tympanum, as sometimes wax forms over the opening, mixing with the secretions from the diseased mucous membrane, making quite a hard impervious wall to the secretions behind. When he looked at the drum-head he did not find what he expected, but one almost intact. It was congested in every part save the posterior superior quadrant. From the top of the malleus running down and back to the bony wall was a thin line of blood indicating the course of a recent rupture, and scattered here and there in its immediate region, a few drops of blood, which were easily wiped off with a piece of cotton wool. At this time there was no gaping. Under suitable treatment in two months the opening had closed, leaving only a thin line of scar, and hearing had become normal, he experiencing no inconvenience. Several months afterwards the membrane gave way at this point from too vigorous blowing of the nose, but the parts soon united without any treatment whatever than a piece of cotton wool worn in the canal for a while, since which time he has been all right.

In looking over the literature of the subject at his command, Dr. Philips finds but one case where rupture of the drum membrane took place from syringing the canal.

The above case teaches that one cannot be too careful in performing even this apparently trivial operation of syringing out the ear. Very great force is not necessary, and a powerful syringe is not needed. Some physicians have claimed that syringing could never do harm, provided only water was used, but Dr. Philips cannot agree with them. Only a short time ago Dr. Philips saw a little sufferer with chronic catarrh of middle ear and eczema of canal, the latter produced by an almost daily syringing for a year. The physician had diagnosticated wax accumulation, and given the mother directions to syringe out ear until she removed all wax. This treatment she kept up faithfully, but she never saw the wax in the returning water, and finally, when the ear

had become very painful the child was put under his care. After the usual treatment for aural catarrh, hearing was completely restored, but for a time the tendency to a recurrence of the eczema remained. While syringing is a good thing at times, its indiscriminate use is not good, and when it is necessary to use it, the greatest care and gentleness should be exercised. In purulent troubles of the ear, usually one syringeful of water will be sufficient to remove all *débris*, and when there is impacted wax a weak solution of bicarbonate of soda poured in the ear will, after several hours, so soften it that it can be removed without difficulty.

The Revival of Venesection.

The *British Medical Journal*, January 31, 1891, says editorially:

The discussion which took place at the last meeting of the Royal Medical and Chirurgical Society of London was in many respects interesting and noteworthy. Dr. Pye-Smith is to be congratulated on having so effectually succeeded in directing attention to a subject which must always have a real, if even only a historical, interest.

The reflections and conclusions contained in the paper were based upon the record of some fifty cases coming under the notice of the writer, in which venesection had been resorted to. The range of diseases in which it was employed included such acute affections as bronchitis, acute broncho-pneumonia, lobar pneumonia, miliary tuberculosis of the lungs, with others of more chronic nature, such as valvular disease of the heart with pericarditis, Bright's disease, aneurism and epilepsy; its value in other conditions, such as hemoptysis, apoplexy; uremic coma, was also considered.

The discussion which ensued was remarkable, on account of the almost complete unanimity which the speakers expressed in favor of the adoption of this method of treatment in suitable and urgent cases. All testified to the great and immediate relief which venesection gave under such circumstances—a relief unattended by any ill consequences on the subsequent progress of the disease.

Considerable differences of opinion, it is true, existed as to the cases most likely to be benefited by the treatment, or, rather, as to the cases which, in the experience of the various speakers, had most benefited by the treatment. For it was one of the noteworthy features of the discussion that there was a commendable absence of recourse to theoretical considerations as a basis for the practice.

In this respect the subject of venesection occupies a different position from that held by it in the former "bleeding era," to which reference was made in such humorous and instructive fashion by Sir George Humphry and Mr. George Pollock. The practice was then based on the humoral pathology which so long dominated the practice of medicine—that pathology which ascribes disease to the presence of deleterious agents in the blood, and which seemed, therefore, to justify the withdrawal of a certain quantity of the noxious blood as one of the best ways of curing it. As Dr. Broadbent pointed out, it was because the practice had been based so entirely on theory that it was carried to excess, and fell into such disrepute.

One of the chief merits of Dr. Pye-Smith's paper and of his subsequent remarks was to lay stress on the importance of resorting to venesection—not for the cure of pathological conditions as such, but for the relief of distressing symptoms depending on temporary alterations in the physiological balance of the circulation. As to the first indication laid down for the performance of the operation—cyanosis with distention of the right side of the heart depending on pulmonary or other obstruction to the circulation—there was a consensus of opinion favorable to the operation, but Dr. Broadbent did well to point out that before resorting to venesection under such circumstances, there should be evidence, as shown by the disparity between the strength of the heart's beat and the weakness of the pulse, that the right ventricle was still acting powerfully, and able to take advantage of the relief afforded it by the withdrawal of blood.

As to the second indication—the pain of aortic aneurism—the cases mentioned by Dr. Pye-Smith and Mr. Hulke, in which instantaneous relief was thus given, were very striking; and evidence of its curative effect on the aneurism was also incidentally adduced by Mr. Jonathan Hutchinson. Nevertheless, as Dr. Stephen Mackenzie pointed out, it may be doubted whether in iodide of potassium, nitrite of amyl and nitroglycerin, we do not possess remedial agents equally powerful and equally efficacious in relieving the high arterial tension on which such attacks of pain depend. The discussion, indeed, brought out the fact that it is

in relieving pain that venesection finds one of its best applications, and more especially in relieving the intense inflammatory pain of pleurisy, pleuro-pneumonia, or the severe pain with threatening onset of cerebral symptoms following injury to the skull.

To those accustomed, as most now are, to regard loss of blood, from whatever source, as an unmitigated evil, the suggestion to follow up an extensive bleeding from the lungs by a further bleeding from the arm, is startling. Nevertheless, something can be said, and was adduced by one of the speakers, in favor of its adoption in cases in which the patient is in urgent danger of suffocation from the reflux of blood into the bronchi. It is, however, peculiarly open to the objection brought against the operation of venesection generally—that in the present state of public opinion as to blood-letting, the discredit of a fatal result is too likely to be hastily assigned to the venesection. Apart from such considerations, however, the general result of an unusually animated discussion will be to direct attention once more to the possible advantages attending the judicious employment of a mode of treatment long condemned as not only useless but dangerous.

Beri-Beri.

A most interesting account of the nature and history of beri-beri is given by Dr. F. B. Sutcliffe in the *Occidental Medical Times*, February, 1891, after observations made in the Sandwich Islands.

Dr. Sutcliffe says: My first patients were Japanese. When I was asked to see them they were under arrest for having refused to work. They claimed to be ill, and the plantation doctor and the overseer claimed they were not. They were arrested, tried, found guilty and sent to the Wailuku jail. They had been driven about twelve miles through the dust and heat—not in a wagon, but a native policeman had ridden his mule, driving them ahead of him. They claimed that he had helped them along with the use of his whip, but I saw no evidence of such treatment, and did not think they were abused in that way. I was asked by the Sheriff to go and see them before they were locked up, as he thought they looked ill. When I saw them I did not know anything of their history. I was asked to examine them and say whether or not, in my judgment, they were ill. I found six of them sitting on a bench, looking worn out and very tired. They all had a temperature above the normal, and a rapid, full pulse. The heart was working hard, altogether out of keeping with the other symptoms. All were complaining of pain in the legs; one or two complained of pain in the chest, putting their fingers under the sternum, and pulling at it as if to lift it out. I, of course, pronounced them ill, but of what disease I only suspected, and refused to make any diagnosis until I had watched them for a day or two. I was then told their history, and I recommended that they be sent to the hospital instead of being put into a cell. I saw them again the same day, and all doubt as to the nature of the trouble was dispelled.

The further development of the disease was very interesting to watch. The legs of all began to swell, and later on this swelling became quite general, in one or two of the worst cases. The day after they were received, three of them were unable to walk without great effort, while the others were decidedly unsteady on their feet. The worst case amongst them assumed the gait and attitude of a child, who, in taking its first unsteady steps, fearing it may fall, puts out its hands as a safeguard, reels on one foot, bringing the lifted foot with undue force to the ground. The gait is peculiar; it seems to be an effort to balance and a false judgment as to distances, rather than a shrinking to ease soreness or pain in the legs or feet. I never saw a patient who seemed in danger of falling backwards; but this may be because, as I have said, they lean forward and put out their hands. The case that I have mentioned as being worse than the others did not improve. Effusion into the chest took place, the heart's action became worse, the kidneys did not perform more than half the work they should, breathing became more and more labored, and death took place in about one week from the time that he was forced to take his long walk to jail. The other patients gradually improved till they were able to leave for Honolulu, at which place I heard that one of them died and the others made a full recovery.

These cases were the most notable that came under my observation. They had been on the island but a short time, the vessel that they came in being still in port. The ship's surgeon visited them, and confirmed my diagnosis; indeed, they knew themselves what the trouble was, and spoke

of it as "kakae," the name they give to the disease.

For the next three years I saw a good many cases of all degrees of severity, though, as a rule, of a mild form, and yielding kindly to treatment. It was a common thing in visiting a plantation to find three or four cases of the disease. Usually the first symptoms of which they complained were swelling of the legs, pain along the tibia and shortness of breath. I would usually find upon examination, palpitation, a quick pulse and marked anemia. My method of treatment was as follows: I changed the patient's diet; where it could be had, milk was largely used, but it was scarce, and the Japanese do not like it. Fresh vegetables were given, and the best of all that we could get was tomatoes. The people most affected were in the habit of eating a deal of rice, salt fish and such oily preparations as the Chinese delight in. Where they could be persuaded to follow out the directions, improvement was the rule from the first, if the disease was not too far advanced when first seen. Occasionally a case would grow worse and have to go the hospital; some would fail to report for treatment after a slight degree of improvement, and, getting worse, come again and again, with the disease in a chronic form.

The drug that I gave oftener than any other was digitalis. I often combined with it the citrate of potash, and when the tongue had cleaned iron was given, and sometimes nux vomica. I was much impressed with the good effect of changing the patient's place of residence, when they were living in a low, wet locality, to a high and drier location. Where this could be done, and when they were well cared for in the matter of diet, the disease was often checked without other treatment. I can recall one case in a woman, a Japanese. She was ill for some time, but finally recovered. She had worked in the field with the men, and was exposed in the same way to like influences. I do not see why the disease should not attack the female, but this is the only case in a woman that I can remember. I never saw a child affected, or a white man, or a native Hawaiian. All my cases were Japanese or Chinese. If Kynsey is correct in his observations of the disease in Ceylon, we must conclude that it differs from that at Hawaii; for the women and children drink of the same water that is supplied to the field hands, and would be just as apt to receive any parasite that it might contain, and as likely to suffer from any disease caused thereby, and this is equally true of the foreigner and of the native.

We have seen that research by those who have had the opportunity of making *post-mortem* examinations has not yielded the results that one might hope to find in a disease in which so many symptoms point to grave changes in the great nerve centres. I think that the paralysis is due to a starved condition of the cord rather than a changed one, and that this condition is due, in part at least to the anemia. The gait, in many cases, is very much like that of ataxia, and I cannot believe with Kynsey, that the embarrassment in this respect is due to the edema of the lower extremities, as I have seen it come on before this was at all marked.

My observation would lead me to conclude that the disease is not as severe in Hawaii as in other countries, and that the worst cases seen there are brought into the country in a more or less advanced stage. While beri-beri is a disease of other lands, we have three cases reported by Dr. Seguin, of New York, in 1888, and I do not see why cases might not be found on this coast almost any time. I have inquired of an intelligent Japanese, of this city, if he had ever seen a case of beri-beri in this country, and he stated he had seen two in San Francisco. This may or may not be so, but to me it seems very probable, for the Japanese understand the disease, its symptoms and its gravity very well.

Chloroform in Tracheotomy.

The *Medical Press*, January 28, 1891, says: A curious fatality attaches to the administration of chloroform in operations on the throat, and this has been noticed more particularly in connection with tracheotomy. So tangible is the risk to which the patient is exposed that it really becomes a question to be seriously discussed, whether the use of chloroform is justifiable under these circumstances. The operation of tracheotomy, when skilfully performed, is short and not very painful, and is most frequently necessary in young subjects, the victims of some laryngeal affection, hence in patients physically well under control. It is, moreover, most commonly performed in order to avert impending asphyxia, and the patient is usu-

ally already suffering from partial deprivation of oxygen, the effects of which are undoubtedly to dull the perception in respect of pain.

On the same subject the *British Medical Journal* (Supplement), January 31, says: M. Geffrier, of Orleans, has recently published (*Revue de Chirurgie*, December, 1890) a paper on chloroform in tracheotomy. The views of this author, which are based on a study of eighty-seven cases, are summed up in the following conclusions: (1) Chloroform is of unquestionable service in tracheotomy on children; (2) its use is not attended with any special danger in this operation, provided that attention be paid to certain contra-indications; (3) the following precautions ought to be taken: (*a*) everything that might be required in the course of the operation should be placed close at hand; (*b*) the administrator, who ought to be experienced in the use of chloroform, should carefully watch the respiration, and, if it be required, excite the respiration by speaking to the patient or by irritating the skin; (*c*) if the state of the respiration become alarming, the inhalation of chloroform should be discontinued at once, and the operation be performed without delay. Extreme asphyxia and prostration from diphtheritic poison are regarded as absolute contra-indications. Marked cyanosis without, and slight cyanosis with impeded expiration are both regarded as contra-indications, though not so stringent as the conditions previously mentioned. Slight cyanosis without obstructed expiration and a very early age are not regarded as contra-indications. In the author's opinion, if the operation be not contra-indicated by the age of the infant, neither will the inhalation of chloroform be contra-indicated.

Hyperemesis and its Treatment with Creasote.

In the *Berliner Klin. Wochenschrift*, December 29, 1890, Dr. Peter Kaatzer has a short communication on the rationale of the treatment of hyperemesis with creasote. He remarks that the therapeutics of this affection have not so far reached definite results. Starting from the supposition that the disease is a reflex neurosis, the narcotics were brought into employment and their achievements praised. According to Eulenburg and Lemaistre, iodide of potash does excellent service. If one holds Kehrer's view, that the obstinate vomiting of pregnancy is occasioned by severe diseases of the stomach, then therapeutic measures must be adopted accordingly.

Kaatzer gives a report of a case in which a woman was thought to be wasting from phthisis. Her sputum contained only a few bacilli, and it came out by and by that the woman was pregnant, and was vomiting after every meal. Kaatzer prescribed creasote, both for the stomach trouble and the phthisis. After taking two doses, the patient ceased to vomit and rapidly recovered. Kaatzer does not know why the remedy did good. The formula used was the following:

℞ Creasoti puriss. . . . . m xxx
Alcoholis . . . . . f℥i
Tinct. gentianæ . . . . . f℥iiss
Ext. caffeæ . . . . . ℥iiss
Aq. destill. . . . . f℥iii

M. Sig. Shake well. Tablespoonful in milk.

Chromic Acid in Habitual Epistaxis.

In the St. Petersburg semi-weekly *Meditzina*, No. 51, 1890, p. 413, Dr. Metchislav V. Pogorelsky, of Elisavetgrad, relates three cases of obstinate habitual epistaxis in school boys, in which, following, Dr. Heryng's recommendation, he successfully resorted to cauterizing with crystalline chromic acid, after all ordinary means had failed. In all the three patients, a rhinoscopic examination revealed the presence of a small-sized, sharply circumscribed highly-vascularized area situated on the nasal septum. Only this congested spot was treated with the acid, the application being repeated once or twice a week and always followed by washing out the nasal cavity with a weak solution of chloride of sodium, or bicarbonate of soda, or borax. In two of the cases 4 or 5 *séances* proved sufficient to effect a complete and permanent cure; in the third a few more applications become necessary to obtain the result.

Fissured Nipples.

Scarff recommends for fissured nipples the following application.

℞ Balsami Peruviani . . . . . f℥ss
Tincturæ arnicæ . . . . . aa f℥ss
Olei amygdalæ dulcis . . . . . f℥j
Aquæ calcis . . . . . f℥ss

M. Ft. Linimentum. S. Apply locally.

—*Journal de Médicine*, January 25, 1891.

THE

MEDICAL AND SURGICAL REPORTER.

ISSUED EVERY SATURDAY.

CHARLES W. DULLES, M. D.,

EDITOR AND PUBLISHER.

N. E. Cor. 13th and Walnut Streets,

P. O. Box 843. Philadelphia, Pa.

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The Editor will be glad to get medical news, but it is important that brevity and actual interest shall characterize communications intended for publication.

CONCEALED ADVERTISEMENTS IN MEDICAL JOURNALS.

For nearly four years the MEDICAL AND SURGICAL REPORTER has steadfastly endeavored to do its share towards elevating the tone of medical journalism in the United States, by rigidly excluding from its pages what are called "reading notices" and every other form of more or less concealed advertisements. It has also made appeals to other medical journals that they would assist in maintaining this standard. It is with great regret that we have observed from time to time that journals issued by wealthy publishing houses have not been willing to adhere to the same principles, and that they have published matter which had been sent by advertisers presumably to many of the medical journals in the United States, and which was certainly sent to the MEDICAL AND SURGICAL REPORTER, and refused admittance to our columns. A recent illustration of this kind was furnished by one of our contemporaries in November, 1890, which contained in its editorial columns an article that the REPORTER had refused to publish, for reasons which we think ought to have kept it out of the columns of a journal which is, on most points, of such high standing. When the Editor of the journal referred to had his attention called to this occurrence, he made a courteously worded reply that the editorial pages of his journal "are not purchasable," and that it never publishes anything referring to a special remedy "unless the article possesses something of scientific interest."

"With this," his letter concluded, "we will drop the subject." Now this the REPORTER regretted, and it also regrets to see in a recent issue of the same journal, a long article, which we presume was sent to the Editor—as it was to the Editor of the REPORTER—by one of our most valuable advertisers. Exactly five hundred powerful advocates pleaded with us that this article was "of scientific interest," but we wrote to the advertiser stating our rule and declining to relax it.

As the REPORTER remarked long ago, in speaking of this subject, we can understand how medical journals which have a hard struggle to maintain their existence may yield to the pressure of advertisers; but we cannot understand how journals which are supposed to be prosperous and strong, can publish, in columns supposed to be devoted exclusively to scientific matter, articles which are prepared for them by advertisers, and which are themselves most palpable advertisements. The rule of the REPORTER in this has been invariably to refuse this sort of matter, taking the ground that its Editor is unwilling to assume so much for his intelligence and his conscientiousness as that he could enter upon so dangerous a course without risk of error on his part or deception on the part of his readers.

We wish that all the medical journals in

the country would adopt this principle—if it be admitted to be a correct one—or, at least, that the strong journals should not do what makes it harder for weaker ones, which would like to do right, to resist a very urgent form of temptation.

FILARIA SANGUINIS HOMINIS.

The occurrence of the conditions known as chyluria, as elephantiasis, and as lymph-scrotum has long been recognized. It is, however, only within comparatively recent years that their common etiological relation has been established. Wucherer, in 1866, found microscopically in the urine of a patient with chyluria a number of minute worms. In 1872, Lewis discovered the same parasites in the blood of man, and gave to them the name *filarila sanguinis hominis*. These were taken to be the embryos of a nematode or round worm, the parent being first detected by Bancroft, in 1876. The literature on the subject has grown to considerable proportions, other contributors having been Manson, Cobbold, MacKenzie, Leuckart and recently, Guitéras, Mastin and De Saussure.

In the *New Orleans Medical and Surgical Journal*, for January, 1891, Dr. Rudolph Matas reports a case of chylocele into the vaginal tunic of the testicle, due to the presence of *filaria sanguinis hominis*, and reviews at length the whole subject.

The parasite is found principally in the tropics, in Brazil, in Egypt, in the Indies, in China, in Australia. It has been found in isolated cases in the Southern United States. The fully developed worm is from three and a half to four inches long, and about a hundreth in diameter, while the embryo is about one hundredth in length and one thirty-two-hundredth in diameter.

The mature worm gains entrance into the human organism with the drinking water. It bores its way through the wall of the stomach or bowels into the lymphatic system, at some point of which it becomes intercepted and here propagates its offspring. These are carried by way of the thoracic duct into the general circulation, in which they can be detected during the periods of rest ordinarily at night, but by day if the patient is active by night and rests during the day. The embryos may circulate in the blood still enveloped in their capsules or they may be set free. In the former condition the ova are too large to pass through the lymphatic system, and are somewhere detained, giving rise to lymph stasis in the circulation behind them.

In this way, depending upon the location of the obstruction, the various conditions of chyluria or hemato-chyluria, chylous hydrocele, lymph-leg or lymph-scrotum may arise. It seems not impossible that effusions into the serous cavities may take place, occasioning chylothorax or chylous ascites. The embryos do not attain mature development in man, but for this require the intermediation of another host. This office is performed by the mosquito. In its depredations, with the blood it removes, it also carries away some embryo filariæ. The mosquito having hatched its own ova, dies and deposits both these and the now maturely developed filariæ upon the water.

Individuals harboring the filaria may enjoy a fair degree of health, notwithstanding the local manifestations. The condition may exist for many years, even beyond fifty. It is not itself directly fatal, except by its complications. Recovery is the rule and may be spontaneous. As the disease has its home in warm climates, removal to colder regions may suffice to effect a cure. The prophylaxis thus becomes a most important matter.

The danger is less from running water, from that obtained from springs and artesian wells, and greater from still water, in reservoirs, cisterns or tanks. In places in which filariæ are known to abound, the water should always be boiled. Filtering or straining alone ought not to be relied upon.

DIGESTION FOR ABSCESS CAVITIES.

At the last meeting of the Medical Society of the State of New York, Dr. Robert T. Morris, of New York, in a paper on the action of trypsin, pancreatic extract and pepsin upon sloughs, coagula and muco-pus, stated that the surgeon's resources were materially enlarged by adding the digestive ferments to his armamentarium, and with them liquefying putrescible material, like the lining membrane and lymph coagula and necrotic tissues of tuberculous abscesses.

He stated that, contrary to the presupposed ideas, pepsin is the best liquefier. This material, which is perfectly harmless in any proportions, can be best used in a ten per cent. solution in water, acidulated with one per cent. of hydrochloric acid. The patient should assume a position favorable for the retention of the solution, and at the end of an hour the liquefied dead tissues may be washed out, and the cleaned abscess may be then easily sterilized with peroxide of hydrogen.

Pepsin, Dr. Morris said, will liquefy dead tissues in the deepest recesses of tuberculous abscesses, and its action is ended abruptly as soon as it reaches tissues through which blood is circulating. Various conditions of disease tissue suitable for pepsin treatment were referred to in Dr. Morris's paper, and he was inclined to expect some advantage from association of the method he advocated with the use of Koch's "lymph;" for he took it as demonstrated that Koch's lymph would loosen and throw out masses of necrotic tissue, and that these could then be reached with pepsin and peroxide of hydrogen—giving the surgeon an ideal group of materials represented by three P's—paratoloid, pepsin and peroxide of hydrogen.

The first part of Dr. Morris's suggestion we think deserves careful consideration. That is, that the solvent power of pepsin upon dead albuminoid matter may be utilized with advantage in the treatment of tuberculous abscess cavities and sinuses. The idea is not a new one but it has never been carried very far as yet; and we commend it to the notice of the readers of the REPORTER, for its simplicity and ease of execution.

BOOK REVIEWS.

[Any book reviewed in these columns may be obtained upon receipt of price, from the office of the REPORTER.]

LEHRBUCH DER KLINISCHEN ARZNEIBEHANDLUNG. Für Studirende und Arzte. VON DR. FRANZ PENZOLDT, Ordentlichem Professor und Oberarzt der Medicinischen Poliklinik zu Erlangen. Zweite veränderte Auflage. Jena: Verlag von Gustav Fischer, 1890. Royal 8vo, pp. xxii, 268.

TEXT-BOOK OF CLINICAL THERAPEUTICS. For Students and Practitioners. BY DR. FRANZ PENZOLDT, Professor Extraordinary and Physician in Chief at the Medical Polyclinic at Erlangen. Second revised edition.

The first edition of this work is dated June, 1889, the present, the second, April, 1890. The book seems to have supplied a want in the German medical profession. A good deal of consideration has been given to the most recent drugs, some of which, it is true, have already proved themselves valuable medicinal agents, while, of others, the utility is, as yet, at least doubtful. The arrangement of subjects is somewhat different from that to which English readers have become accustomed since the advent of the physiological method in the study and administration of remedies. Two great divisions are made: inorganic medicaments and carbon compounds. Under the former are presented metals and non-metals; under the latter, in many subdivisions, the remainder of the subject. The topics are discussed with regard to the characters and properties of the drugs, as to their physiological actions, their toxicology, their therapeutical applications and their diagnostic value. Many of the opinions expressed are at least not generally accepted among us, if not at variance with our views, while some therapeutical applications of considerable importance are quite ignored.

Of bismuth it is said: "Despite its ancient reputation, its therapeutical utility in various directions is not above doubt." It is not thought to be efficacious in gastric ulcer. "Only in certain cases of chronic diarrhœa, given in large doses, have certain otherwise skeptical observers reported good results." It may be easier to treat acute and subacute attacks of gastro-intestinal catarrh, with nausea, vomiting and diarrhœa, by means of opium, but bismuth is certainly the safer remedy. Chloroform is said to be less dangerous as a general anæsthetic than ether. Antipyrin is described as having almost a specific action in acute articular rheumatism.

The general indication for the administration of digitalis is persistent cardiac weakness and its consequences. The most important question is: Is the arterial tension subnormal? Such a condition is usually associated with a small, irregular or frequent pulse, but not necessarily. The pulse may be regular and infrequent, yet digitalis may be indicated. The utility of digitalis consists in the restoration of the ruptured compensation, the removal of the œdema, of the cyanosis and of the dyspnœa.

Strychnine, it is said, may do good in certain am-

blyopias and amauroses, but it has no other significant therapeutic value. Strychnine is one of our most reliable and active cardiac stimulants, and is useful as a tonic in asthenic conditions. Nor is atropine given a therapeutical place as a prompt and efficient cardiac stimulant.

The claims of gelsemium as a remedy for neuralgia, especially of the inferior maxillary type, are rejected. The only indication given for the use of pepsin is total absence of the gastric ferment, such as occurs in atrophy of the mucous membrane of the stomach. Even in these cases, its utility would be doubtful because of the lessened absorptive activity of the mucous membrane. The good results obtained in erysipelas by the use of pilocarpus and pilocarpine are not alluded to. The preparations of aconite are said to be not useful. The administration of aconitine in neuralgia cannot be recommended.

The work may be a true reflex of German therapeutics, but it presents many variations from our own. We have only noted some of the most striking differences.

ŒUVRES COMPLÈTES DE J. M. CHARCOT. Hémorragie et Ramollissement du Cerveau; Metallothérapie et Hypnotisme; Électrothérapie.

COMPLETE WORKS OF J. M. CHARCOT. Hemorrhage and Softening of the Brain; Metalotherapy, Hypnotism and Electrotherapy. Volume IX. Thirty-four illustrations and thirteen plates. 8vo, pp. viii, 571. Paris: Office of the *Progrès Médical*, 1890. Price, 15 francs.

This volume contains Prof. Charcot's writings upon cerebral hemorrhage, which he believes to be due, in the majority of cases, to miliary aneurisms of the small arteries of the brain. Abstracts of eighty-seven cases are given in support of his opinion. As regards softening of the brain, he accepts the view which attributes the softening to an alteration of nutrition following upon embolism, atheroma or thrombosis. There are also important papers on joint-diseases apparently due to diseases of the brain and cord. The second part of the book is devoted to metaloscopy, metalotherapy and hypnotism. In the third and concluding part, Prof. Charcot speaks of electrotherapy, and especially of the use of static electricity in medicine.

The whole book is a mine of information, and will prove invaluable to students of nervous diseases.

NOTES AND COMMENTS.

Congenital Occlusion of the Urethra.

An interesting example of congenital obstruction to urination is given by Dr. James Adams, of Eastbourne, in the *British Medical Journal*, January 31, 1891. Dr. Adams says: My attention has been directed to this rare condition by a case which occurred in my practice in October, 1889. I attended a confinement, and after a natural labor a male child was born at full term, who was well formed, and in every respect apparently normal, except he was the subject of hypospadias. Two hours afterwards I was sent for to see the child, because the nurse, who was a trained and intelligent woman, thought something was wrong, as the infant, although he had been bathed and dressed, and had passed a motion, had not micturated. The meatus was patent, so I tried to pass a small blunt silver probe down the urethra, but it would go only a very short distance. I directed the nurse to give the child a warm bath and keep him in the water for fifteen minutes, and to repeat the bath two or three times during the next twelve hours if no urine passed.

The next morning, fifteen hours after birth, I found that no urine had been passed and the child was beginning to be restless and uneasy, but without symptoms of distress. I again tried to pass, with all gentleness, the silver probe, and failed to get it further than the previous attempt. I now took a small French catheter, and that seemed to be brought up at the same distance from the meatus. Being a non-metallic instrument, I used as much force as it would bear, but did not succeed in getting beyond the obstruction. I withdrew the catheter and tried again, and this time succeeded in penetrating what I believe to have been a thin membranous structure which was occluding the urethra. The urine came freely through the catheter, and I had no further trouble with the case.

It is open to remark that the urethra might not have been occluded, being merely narrowed by a congenital stricture, or that the urethra was of normal caliber, and that its sides were agglutinated by inspissated secretion. While I am unable to disprove either of these opinions, I may say that had it been a stricture I should have expected subsequent trouble, and had it been the other condition I should have expected the hot baths externally, and the effect of the warm urine internally on the vesical side of the obstruction to have caused its disappearance. Another point tending to support my view that it was an organic occlusion of the urethra is the fact of the infant being a hypospadian, showing some developmental abnormality of the mesoblast in this region. And in a case of congenital occlusion reported by Mr. Forster, of Darlington, in the *British Medical Journal* of January 3, 1885, the infant was also the subject of hypospadias.

The only other instance I have met with of this condition was in 1878. This was a

premature child, born at seven mouths, and a weakly specimen for that age. I was unable to pass a probe or catheter, and the child died forty-eight hours after birth, never having passed any urine. The child was too feeble to bear any further surgical proceedings, even if the parents would have consented.

The literature of this subject is very scanty, and in several of our English text-books no reference is made to it. American works contain the fullest account of it, and I quote the following by Professor Duplay from *The International Encyclopædia of Surgery*, edited by John Ashhurst, M. D.:

"These occlusions, which result from gluing together of the two corresponding halves of the penis, may occupy any point in the canal, but the meatus urinarius is the seat of election. Sometimes the mucous membrane of the glans is seen to pass in front of the meatus without anything being seen at this point which could indicate the existence of an orifice. . . . Most frequently the meatus is well formed, and ends in a *cul de sac* at a distance of a few millimeters. We have only a very small number of examples of occlusions situated at other points of the canal. The diagnosis is especially easy when the occlusion is in the meatus or in the fossa navicularis. Deeper occlusions may escape the first examination, but the effectual effort of the infant to urinate, and sounding with a curved stylet or very small catheter will usually render error impossible."

I will also give the short description found in Gross's *Surgery*:

"The most common of these congenital vices are first closure or contraction of the meatus; and, secondly, absence, contraction and change of form of the urethra. Occlusion of the external meatus always demands prompt interference. When it is caused simply by a duplicature of the lining membrane forming a sort of hymen, a vertical incision in the direction of the natural outlet is generally all that is required, the edges of the wound being kept asunder by means of a bougie. When the imperforation depends upon the presence of fibrous tissue and reaches a considerable distance back, the operation will be more serious, and will require to be performed with a trocar."

The diagnosis in these cases is easily made, for the subjects are newly-born infants who are unable to pass water, and if the obstruction is at the meatus the condition is at once recognized, and if the obstruction is further down the urethra, the use of the catheter makes it evident. If the surgeon is unable to penetrate the obstruction by means of a soft catheter, he cannot judge how far the occlusion extends between the point where the catheter is brought up and the bladder, as it may involve the whole of that portion of the urethra, or only a small part of it.

On the question of treatment the proper course to adopt is clear where the occlusion consists of a membranous veil covering the meatus. This veil must be incised, and the orifice kept patent by passing a bougie daily for a week or ten days. Also in cases similar to mine, where a non-metallic catheter can be with moderate force thrust through the soft and easily lacerable membrane occluding the urethra, this treatment is clearly the one to follow; but in those still rarer cases where the urethra is obliterated for some distance, it appears to me there presents itself to the surgeon a most unfavorable condition to deal with satisfactorily.

Three courses are open, namely (1) forcing a passage by means of a curved stylet, or small curved trocar and canula; (2) perineal cystotomy; (3) suprapubic puncture. The objection to forcing a passage is that it is an unsurgical and hazardous proceeding, and that you are working in the dark and have no guide to rely on. If you reach the bladder so much the better for your patient, for your treatment saves his life and leaves him with a urethra in its normal position.

Another agument in favor of this course is that it has been adopted with success, notably in the case mentioned above, where the urethra was said to be wholly obliterated. With regard to perineal cystotomy by the median method with the finger in the rectum, the distance to reach the bladder is short, and as it would be distended, one would feel more certainty of finding it than by the first plan. But I should give the preference to suprapubic puncture by small trocar as being simplest and safest, and I should fix in a rubber catheter and wait upon events. Afterwards, when the child was old enough, the suprapubic opening might be enlarged, the bladder explored, and a passage made from its interior by means of a curved trocar and canula as near along the normal position of the urethra as could be ascertained.

Medical and Social Aspects of Abortion.

At the Third General Meeting of Russian Medical Men at St. Petersburg, Dr. Natalïa V. Thalberg, a woman doctor of Kïev, read a communication (*Proceedings*, No. 8, 1889, p. 256) on criminal abortion, and a rational struggle against that steadily progressing social evil. She says that a considerable number of cases of artificial abortion give rise to grave and permanent disturbances in the woman's health, not unfrequently ending in death. Both in Western Europe and also in Russia, criminal abortion has at present attained great dimensions and manifests unmistakably a harmful influence on the health of the population. A truly regretful circumstance is the increasing assistance in the matter rendered to women by the members of the medical profession; and its ill-effect is enhanced by the fact that often medical art proves powerless to obviate the injurious effects of the abortion it produces, due especially to a hasty and clumsy performance of the operation, and also to the violation of elementary rules of precaution during the after-period. Apart from austere views entertained by modern society in regard to an extra-matrimonial pregnancy, and from increasing poverty, the main causes of a progressive increase of abortion are: defective moral and mental education of women, and woman's ignorance of the criminality of abortion, and especially of its harmful effects on her own health. An indirect but still powerful cause of the spread of abortion is found in the defective sense and principles of those members of the medical profession who render their assistance in the matter.

In view of these facts, a rational struggle against the evil demands joint action by the authorities and by the medical profession. The initiative in the matter belongs undoubtedly to the profession, since the medical man, whom both married and single women solicit to procure abortion, knows best the consequences of its performance. Hence, an imperative duty arises for the profession to draw the attention of the community to the evil, to elucidate its causation, and to find out effective means for its prevention.

Dr. Thalberg suggests the following measures to restrict criminal abortion: 1. To reduce to the lowest point possible the legal punishment of women who have abortions performed, since severe laws have not served to prevent them from undergoing the operation, while they act powerfully in restraining them from denouncing the abortionist. 2. To disseminate knowledge of the injurious effects and dangers of abortion, by means of pamphlets, public lectures, etc. 3. To establish numerous lying-in hospitals and homes for foundlings all over the country. 4. To promote the education of women tending to elevate their mental and moral level.

[Our Russian translator suggests that we may take the liberty to express doubt in regard to the actual degree of effectiveness of measures proposed by Dr. Thalberg. Obviously, her measures are nothing else than mere palliatives. However humane, they do not touch in the least the cardinal etiological factors of the social evil. Those factors are (1), in Russia, an appallingly progressing wholesale pauperism which, on one hand, makes the establishment of a "legal" family less and less accessible, because of its expensiveness; and, on the other hand, converts the appearance of every child into a true disaster, and (2), the ethically immoral moral codex of the modern "civilized" community, which sentences to social death every unhappy woman who, having no possibility or opportunity for establishing a "legal" home, gives way to temptation to the performance of her sexual functions. He says that only those measures can prove effective against the slaughter of intra-uterine children, which honestly and courageously strive to improve the economical conditions of the community and to humanize the moral codex of the latter. None of the great social evils undermining the modern community can possibly be remedied by moralizing or by legal and hygienic trifles which leave intact the essence of the matter.]

Country Practice.

In the *Medical World*, March, 1891, there is a letter from Dr. George R. Robbins, of Hamilton Square, N. J., which gives a description of some of the experiences of a country practice, which we are sure will be read with interest and sympathy by many of the subscribers to the REPORTER.

Of obstetrical work Dr. Robbins, who has been in practice twenty-one years, says: "You will be taught not to approach an obsteteric case without fortifying yourself with

an armful of instruments, carbolized silk to tie the cord, bichloride for washing hands, iron, ergot, chloroform, morphine, turpentine, quinine, etc.—a whole bagful of bottles—all good. They will serve you if you have the money to buy them. I have attended cases of confinement after waiting for hours asleep in a wood-box behind the stove; not a rag to dress the child; tied the cord with a piece of my shoe-string, cutting the cord with an old rusty butcher knife, all with good results.

"Imagine yourself summoned to attend a case of labor. You approach the house with your grained leather obstetrical bag, containing forceps, craniotomy instruments, blunt-pointed scissors, spring lancet, carbolized silk, absorbent cotton, drugs as enumerated above, etc. You enter the waiting room, carpeted with brussels, with velvet plush reclining chair, with foot-rest before the grate. You are informed that you are the sole possessor of that room when not required in the adjoining one. At the proper time you approach your patient, notice all silk-lined paraphernalia for little 'teetsy-weetsy,' with all kinds of powders, puffs, pastes, etc. When your blessed one is comfortable you are furnished with warm diluted Florida water and bouquet soap to wash with, and May-bloom to complete your toilet. Splendid. But you may thank your stars if you do not get your sleep in a wood-box, and after the earth has been gladdened with that familiar 'squall,' go down to the ditch and wash your hands the same as I have done. I have made my splints for fractures from barrel staves, shingles, cigar boxes, leather, pasteboard, anything. I performed my first craniotomy alone, delivering the child, weighing sixteen pounds, saved the mother, all with a jack-knife, which I borrowed from the woman's husband, and my tooth forceps. Why did I do it with these tools? Because I had no proper instruments and was too poor to buy them at that time."

New Method of Detecting Tubercle Bacilli.

The *Lancet*, February 7, says: Dr. Biedert, of Hagenau, in Alsace, has devised a new and considerably surer method for the discovery of tubercle bacilli in sputum. He collects a tablespoonful or more of the sputum, mixes it well with a glass rod, takes some of it and dilutes it together with two tablespoonfuls of water and four to eight drops of solution of caustic soda according to the density of the sputum, and then boils it, stirring it the while in a shallow cup, gradually adding four to six tablespoonfuls of water till he gets a pretty thin fluid mass. This he allows to stand for two hours in a high glass tapering as finely as possible downwards, and all the formed particles sink with the tubercle bacilli to the bottom. Then he pours off the fluid, retaining the sediment, parts of which he takes out with a platinum needle and rubs them fine on a cover-glass. When the preparation is dry he passes it through a flame, stains it with a carbolized solution of fuchsine, and then bleaches it with 25 per cent. sulphuric acid. If there are any tubercle bacilli they remain red, and are thus distinguishable under the microscope. Even a single bacillus is discoverable in this way, whereas the older methods yielded a positive result only if there were many.

Trained Nurses.

In an address delivered before the Boston City School, an abstract of which appears in *The Nightingale*, January 31, 1891, Dr. Chas. M. Green makes some timely remarks upon the duties and conduct of the trained nurse. He says:

The nurse's duty to the patient consists chiefly in faithfully carrying out the physician's directions, in accordance with her previous training, unless the doctor specifies other methods.

The nurse's manner in the sick-room should always be cheerful and hopeful. No matter how grave the case, she should never betray in her face or manner the anxiety she may feel. She should hold no long or whispered interviews with the physician, or members of the family, within sight or hearing of the patient: such conduct always excites suspicion in the patient's mind that his case is not progressing favorably, and deepens the forebodings which patients are prone to cherish. She should never announce in the sick-room the patient's temperature, or give other information about the case than that which is favorable and encouraging. Her report to the physician should be made in an adjoining room. Startling news or private grievances should never be made known in the sick-room. All medicines and other appliances of the sick-room should be kept in an adjoining chamber; but if this is impossible, they should be neatly ar-

ranged upon a table, and perhaps hidden with a screen; some patients have a horror of gazing upon the cups, bottles and spoons, which remind them of their condition.

Unless the continued presence of the nurse is necessary in the sick-room, she should leave the physician alone with the patient during a part of his visit. There may be some confidences between patient and doctor which it is desired she should not share. When members of the family visit the patient, if that is allowed, the nurse should withdraw for a time, for obvious reasons; this will give her time for rest and relaxation, and the patient an opportunity for a few minutes' privacy with his family.

As the patient enters upon his convalescence, he usually begins to take a lively interest in what he can eat, or he may be led to do so. Then the nurse has an opportunity to use her taste in the serving of his food; for we all know how much better everything tastes when it is daintily served.

Above all things, the nurse should not gossip. Patients will often listen with the greatest interest to what she may say of other cases and people, and then wonder afterwards whether she will not, at her next case, portray the scenes of their sick-room. A high-minded nurse should remember that she has no right to trifle with the sacred confidence of the sick-room, or carry beyond its walls the private affairs which have necessarily come to her knowledge. The nurse should not at first seek to displace from the sick-room members of the family who are in attendance upon the patient; they are often loath to give up one dear to them to the care of a stranger, and unwilling to be directed by the nurse. She should, therefore, manifest her willingness to assist them, and gradually they will perceive that she is far better fitted than they for the duties of the sick-room, and will gracefully yield to her the position which it is her province to occupy. A nurse should be willing to go beyond the limits of her legitimate work, if she can do so without neglecting her proper duties. It always pays to be obliging in every walk of life; and the nurse who is willing to wash some needed article of dress, to bind up a sore finger, mend a broken shoe string, or sew on a button, will be popular in any household. All that has been said about gossiping in the sick-room, applies with equal force in the household. Family secrets will necessarily come to the knowledge of the nurse, and she should guard them as religiously as those of the patient; her duty in this respect is the same with that of the doctor.

The nurse will generally be asked where she wishes to take her meals; the reply should be: "Wherever it is most convenient to the family," adding, "in the dining-room, after the family is served, if it is agreeable." If the family breakfasts late, however, she may ask to have her breakfast earlier. It is probably not agreeable to the nurse to eat with the family, even if she is asked to do so; and if so asked, it would be right for her in a quiet way to mention one of the many reasons why she had best not do so. When the patient is very sick, it may be necessary that the nurse should be served on a tray in an adjoining chamber. Sometimes the nurse is expected to eat in the kitchen. It is well to advise the family that it is best that the nurse should be in the kitchen as little as possible; and that if she has to eat with the servants, it will be hard for her, without giving offense to them, to remain loyal to her duty in respect to the secrets of the sick-room. When, however, the nurse's duty takes her to the kitchen, perhaps to prepare some article of food for the patient, she should always greet the servants kindly, and assume no superiority. A nurse can, by her gentleness and tact, so win the regard of a large corps of servants that they will almost bow down and worship her. Such a nurse is never without engagements, and does much to increase the demand for trained nurses in the community.

Control of Sources of Water Supply.

The *Engineering Record*, February 14, 1891, says:

The question of the control of sources of water supply is one of great and increasing importance, and the necessity of obtaining an abundant supply of pure and wholesome water for household use is a universal one. In sparsely settled districts of this country, or in small communities, it is usually an easy matter to obtain it from local springs or properly located wells. But when small communities have grown into towns, and towns into cities, many difficulties are encountered. Local sources of supply become contaminated, and the demand being a large and concentrated one, the supply frequently has to be sought at considerable distances. Even then, especially in the more thickly

settled portions of the country, it requires constant care to keep the sources of supply free from defilement.

The right to the use of water for the supply of cities and towns must necessarily take precedence over all individual or corporate claims to ownership for manufacturing or other purposes, and it is generally the case that communities, seeking a public supply, are authorized by State legislation to acquire, by the right of eminent domain, any water that may be needed for this purpose, paying, of course, for all damages sustained by mill owners or riparian proprietors from its appropriation or diversion.

With the danger of this constantly increasing demand producing a scarcity of wholesome water available for city uses, it seems important that some steps should be taken to guard against undue appropriation of sources of supply by one city, far beyond its present needs, and at the expense of other cities in the same State; and still more against the monopoly by syndicates of all desirable sources of supply in a State or district, for the purpose of "making a corner" in water and compelling the cities to buy of them, in one form or another, at a greatly enhanced cost. We have constantly advocated the desirability of cities owning their own systems of water supply when practicable; still we have been willing to acknowledge that there are cases in which private ownership is admissible, since otherwise, for various reasons, the construction of the works would be indefinitely postponed—and a private supply is certainly better than no supply at all. The legal incorporation, therefore, of a private company for supplying water to a given place, endowing it with the necessary powers to accomplish this object, is not a subject of criticism.

This, however, is quite a different matter from the incorporation of a company with *general* powers to appropriate *all* the water supplies of a State, and to furnish more or less water from them to any places it may see fit to contract with for this purpose. It is very questionable if the purchase of the mill powers of a stream or the shores of a lake or pond by such a corporation entitles it to the absolute ownership of the water for any other purpose. In any case, it would certainly seem as if a city should have the same right of condemnation of water for its necessities against any such corporation or syndicate, as against any private parties, and that, moreover, it should not be compelled to pay any fancy price for it—any more, in fact, than the actual damage which its diversion may cause to manufacturing or riparian interests. Speculation in land, which, it is expected, a city or State may have to condemn for its own use, seems to be an unavoidable evil; but no good reason can be advanced why a private corporation, for the same speculative purposes, should be permitted to monopolize water supplies by granting it the same absolute ownership therein as in lands.

This question of the control and conservation of water supplies has been exciting a good deal of interest recently in the State of New Jersey, and Governor Abbett seems to fully appreciate its importance, as is indicated by his recent message to the Legislature.

Parasitic Chylocele in New Orleans.

The filaria sanguinis hominis is a curious parasite which has been proved to be the cause of chyluria, chylocele and elephantoid affections of the scrotum and lower extremities. These diseases are relatively common in the East Indies, and are met with in the West Indies and South America. Dr. John Guitéras, Dr. William Mastin, and Dr. De Saussure have also reported cases occurring in the South Atlantic and Gulf States, especially in Charleston, S. C. Dr. Rudolph Matas adds another case to the comparatively short list in a paper published in the *New Orleans Medical and Surgical Journal*, January, 1891. The case is interesting as an instance of accurate clinical diagnosis, subsequently confirmed by pathological study; but it also shows that the filarial diseases may in future become common in that part of the country. For while the patient was a native of Cuba, and in all probability became infected there, yet he had lived in New Orleans nine months before he came under observation for chylocele of the testicle. This fact of course proves that the climatic conditions of New Orleans, as those of Charleston, are well adapted to the development of the filaria. In Dr. Matas's case the embryos of the filaria were found in the chylous fluid from the testicle and also in the blood.

Dr. Matas reports his case with great care, and adds much to the value of his paper by giving a very interesting account of the first discovery of the filaria, its life history, and of the diseases caused by it, with a few re-

marks on prognosis and treatment. When the adult female parasite can not be discovered, and usually it can not, Dr. Matas thinks the most important therapeutic measure is removal to a cold climate and a high altitude. Such a radical change in the environment of the best gradually brings about the destruction of the parasites.

Relationship of the Diseases of Animals to those of Man.

The *Medical Press*, January 28, 1891, says: The discussions which have recently taken place as to the causation and prevention of tuberculosis, have invested with a peculiar interest the question of the relations of the diseases of the lower animals to those of man. The subject is one to which attention has not been long directed, but even at this early stage, it bids fair to add considerably to our knowledge in respect of the prophylaxis of certain transmissible diseases. The matter, as a whole, has been assigned a special section in the Congress of Hygiene which is to take place in London in August next, and the section will take into consideration, *inter alia*, the infectious, contagious, parasitic, and other diseases communicable from animals to man, and *vice versâ;* the methods of the propagation of diseases affecting mankind by means of animals and animal products; the infection of meat, milk and other comestibles; and the restrictions to be placed upon the sale of infected food and the movements of infected animals. On each of these questions papers will be obtained from the highest British and Continental authorities as the basis of the debates, which ought, therefore, to prove exceedingly instructive and interesting. Though less attractive, the prevention of tuberculosis and kindred diseases is vastly more important than their cure, and promises very much more satisfactory results.

Infectiousness of Croupous Pneumonia.

In the *Bolnitchnaia Gazeta Botkina*, No. 29, 1890, p. 714, Dr. Nil I. Sokoloff, senior house physician to the Alexandrovsky Pavilion Hospital, St. Petersburg, publishes a valuable paper in which he brings forward the following several propositions. 1. Croupous pneumonia represents, most undoubtedly, an infectious disease, which (in hospitals) spreads from man to man very much in the same way as erysipelas. 2. Patients suffering from typhoid, typhus and relapsing fevers manifest a quite peculiar predisposition to catch the infection. 3. The mortality amongst such patients contracting pneumonia is truly enormous (about 65 per cent.). 4. In view of the fact, all hospitals should be furnished with special wards for pneumonic patients. 5. As soon as a typhoid patient, when staying in the hospital, develops signs of pneumonia, he must be at once isolated, and the ward most strictly disinfected. 6. No ward which has been occupied by pneumonia cases can be subsequently used for other patients without a preceding thorough disinfection. 7. In view of a generally high mortality from pneumonia (amounting to 12 per cent. under best management of the cases); and of the infectiousness of the disease, the appearance of an epidemic of croupous pneumonia in the town given should always constitute an imperative indication for adopting strictest general sanitary measures. 8. Every one and all of hospitals should keep special isolation wards for admitting diagnostically obscure cases of infectious affections.

Hemoglobinuria from the Use of Quinine.

Dr. Coromilas, of Calamata, Greece, in the *Journal de Médecine*, January 25, 1891, reports six cases in which hemoglobinuria repeatedly followed the administration of quinine. None of the patients could take the sulphate, two could not take cinchona in any form, one not the salicylate, one not the valerianate, one not the hydrochlorate of quinine, without the occurrence of hemoglobinuria; while two could take cinchona, and one of these the salicylate of quinine also with safety.

RESOLUTION.

WOMAN'S MEDICAL COLLEGE OF PENNSYLVANIA.

PHILADELPHIA, PA.

Dean's Office, Feb. 21, 1891.

Resolved, that the Faculty of the Woman's Medical College of Pennsylvania approves of the present bill of Hon. Frank M. Riter to establish a State Board of Medical Examiners and Licensers.

CLARA MARSHALL, *Dean.*